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Kramer Electronics, Ltd.

USER MANUAL

Model:

RC-53DLC

K-NET™ Auxiliary Control Panel

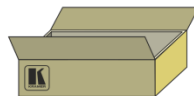im Vertrieb von   CAMBOARD Electronics

RC-53DLC Quick Start Guide

This guide helps you install and use your product for the first time. For more detailed information, go to http://www.kramerelectronics.com/support/product_downloads.asp to download the latest manual or scan the QR code on the left.

Step 1: Check what's in the box

☑ **RC-53DLC**   ☑ 1 Quick start guide
☑ Screwdriver

Save the original box and packaging materials in case you need to return your product for service.

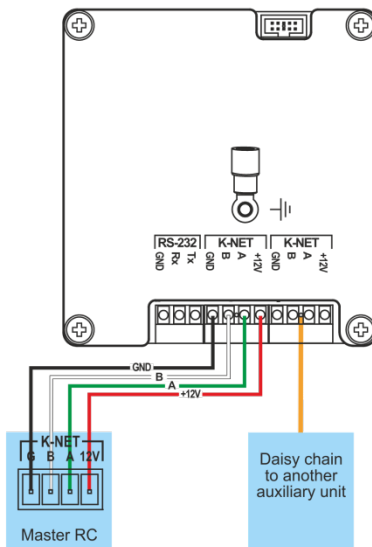## Step 2: Connect the RC-53DLC

Always switch off the power on each device before connecting it to your **RC-53DLC**.

Connect a master room controller to one of the K-NET terminal block connectors.

Optionally connect another auxiliary device to the other K-NET terminal block connector.

Note that the RS-232 port is for factory use only.

Always use Kramer high-performance cables for connecting the **RC-53DLC**.

Master RC

Daisy chain to another auxiliary unit

Step 3: Configure the system

Set up the labels on the buttons and configure the system via the K-Config software, using the Master room controller.

Step 4: Install the RC-53DLC

Mount the **RC-53DLC** in a suitable wall box

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1   Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups[1] that are clearly defined by function.

Congratulations on purchasing your Kramer **RC-53DLC** *K-NET™ Auxiliary Control Panel* which is available in European (80mm and 86mm height versions) and American versions, and can be used as a system controller when connected via K-NET™ to a Master room controller[2] (for example, the SV-552 *SummitView™ Processor / Switcher* or one of the Kramer SL series controllers).

2   Getting Started

> This user manual is written for the end user. Refer to the separate
> **K-Config** Configuration Guide (available online) for details of how to
> install and configure the Room Controller[3]

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

Go to http://www.kramerelectronics.com to check for up-to-date user manuals, application programs, and to check if firmware upgrades are available (where appropriate).

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1 GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Routers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

2 K-NET is a proprietary Kramer protocol for communication between Kramer products

3 The guide provides information about how to set up the system and is updated on a regular basis. For the latest online guide, go to http://www.kramerelectronics.com

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2.1   Achieving the Best Performance

To achieve the best performance:

- Use only good quality connection cables (we recommend Kramer high-performance, high-resolution cables) to avoid interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Do not secure the cables in tight bundles or roll the slack into tight coils
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality
- Position your Kramer **RC-53DLC** away from moisture, excessive sunlight and dust

> This equipment is to be used only inside a building. It may only be connected to other equipment that is installed inside a building.

2.2   Safety Instructions

Caution: No operator serviceable parts inside the unit

Warning: Use only the Kramer Electronics input power wall adapter that is provided with the unit

Warning: Disconnect the power and unplug the unit from the wall before installing

2.3   Recycling Kramer Products

The Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC aims to reduce the amount of WEEE sent for disposal to landfill or incineration by requiring it to be collected and recycled. To comply with the WEEE Directive, Kramer Electronics has made arrangements with the European Advanced Recycling Network (EARN) and will cover any costs of treatment, recycling and recovery of waste Kramer Electronics branded equipment on arrival at the EARN facility. For details of Kramer's recycling arrangements in your particular country go to our recycling pages at *http://www.kramerelectronics.com/support/recycling/*.

KRAMER: SIMPLE CREATIVE TECHNOLOGY

3   Overview

The **RC-53DLC** is an auxiliary remote control panel for Master Room Controllers[1] for control of A/V equipment in a room.

The **RC-53DLC**:

- Features six front panel, backlit[2] buttons designed in two groups; one group of two buttons, and another group of four buttons
- Has a digital volume control adjustment knob
- Is available as a 2 Gang wall plate for the USA and for Europe
- Does not require a separate power supply
- Includes an RS-232 serial port
- Includes two K-NET ports and a USB port for firmware upgrade
- Features two programmable LCD displays, one for each button group

4   Defining the RC-53DLC

Figure 1 and Table 1 define the **RC-53DLC** front panel.
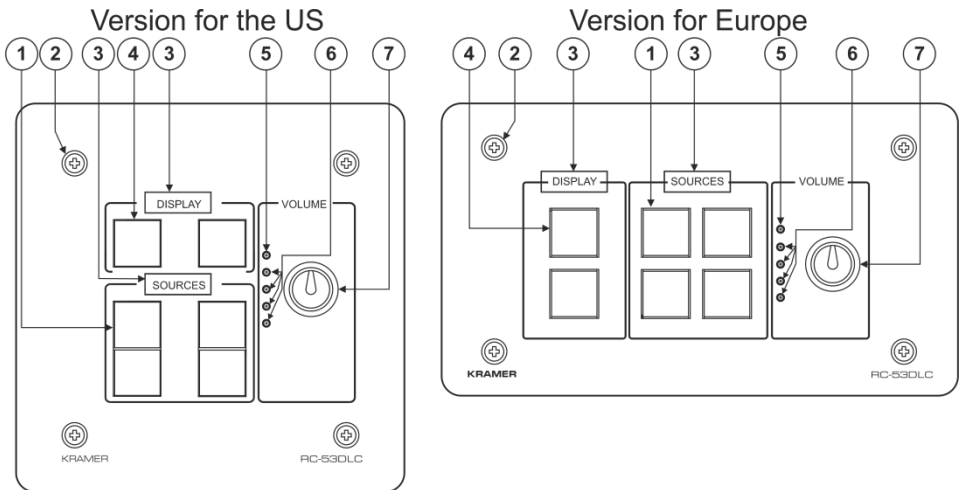

Figure 1: RC-53DLC K-NET™ Auxiliary Control Panel – Front Panel

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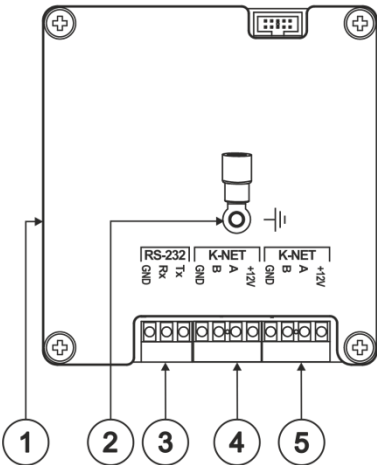1 Such as the Kramer SummitView System or the SL-1 Master Room Controller

2 256 colors are available for backlit buttons (to be configured by the system integrator). The colors of each button can be programmed with flexible RGB values

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Table 1: RC-53DLC K-NET™ Auxiliary Control Panel – Front Panel Features

#	Feature	Function
1	*SOURCE* Buttons	Group of four programmable, backlit buttons[1]
2	Faceplate Screws	Four screws connecting the faceplate to the Rear Box
3	"*DISPLAY*" and "*SOURCE*" Labels	Programmable, 8 character, LCD displays on a blue background
4	*DISPLAY* Buttons	Group of two programmable, backlit buttons
5	Maximum *VOLUME LED*	Lights red, indicating maximum volume
6	*VOLUME* LEDs	Light green, indicating volume level
7	*VOLUME* Knob	Rotate clockwise to increase volume level

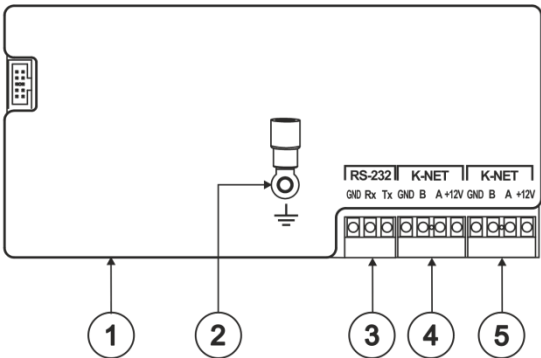[Figure 2](#) and [Table 2](#) define the **RC-53DLC** rear panel.

Figure 2: RC-53DLC K-NET™ Auxiliary Control Panel – Rear Panel

Table 2: RC-53DLC K-NET™ Auxiliary Control Panel – Rear Panel Features

#	Feature	Function
1	Program USB Connector	Connect to a computer for firmware upgrade[2]
2	Grounding Screw	Connect to grounding wire (see [Section 4.1](#))
3	*RS-232* Terminal Block	For factory use only
4	*K-NET* Terminal Block	Connect the GND to the Ground connection[3], connect B (-) and A (+) to RS-485, and connect +12V to +12V on the companion unit
5	*K-NET* Terminal Block	

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1 By the system integrator only

2 When the unit is connected via K-NET to a Master Room Controller, you can upgrade the firmware via the USB or ETH ports of the Master Room Controller

3 The ground connection is sometimes connected to the shield of the RS-485 cable (in most applications, it is not connected)

4.1 Grounding the RC-53DLC

The grounding screw is used to earth the chassis of the unit to the building ground preventing static electricity from impacting the performance of the unit.

Figure 3 and Table 3 define the grounding screw components.

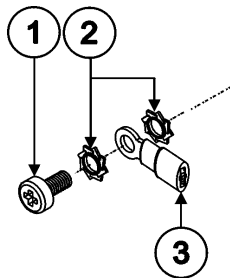*Figure 3: Grounding Connection Components*

Table 3: Grounding Component Descriptions

#	Component Description
1	M3X6 screw
2	1/8" Toothed Lock Washer
3	M3 Ring Tongue Terminal

To ground the RC-53DLC:

1. Connect the Ring Tongue terminal to the building grounding point wire (it is recommended to use a green-yellow AWG#18 (0.82mm^2) wire, crimped with a proper hand-tool).
2. Insert the M3x6 screw through the toothed lock washers and the tongue terminal in the order shown above.
3. Insert the M3x6 screw (with the two toothed lock washers and ring tongue terminal) into the grounding screw hole and tighten the screw.

5   Using the RC-53DLC K-NET™ Auxiliary Control Panel

The installation process is not detailed in this user manual. This user manual is applicable once the unit is installed and configured[1], and includes:

- Setting up the labels on the buttons, according to your specific requirements
- Configuration of the Master room controller via the **K-Config** Windows[®]-based configuration software

Since the auxiliary panel is used as a remote controller for Master Room Controllers via the proprietary communication channel K-NET (as illustrated in Figure 4):

- It requires only a K-NET connection to the Master Room controller
- A power supply unit is **not** required[2]
- The auxiliary panel can be programmed only via the Master Room controller (for example, the Kramer **SV-551** *SummitView™ Processor/Switcher*)
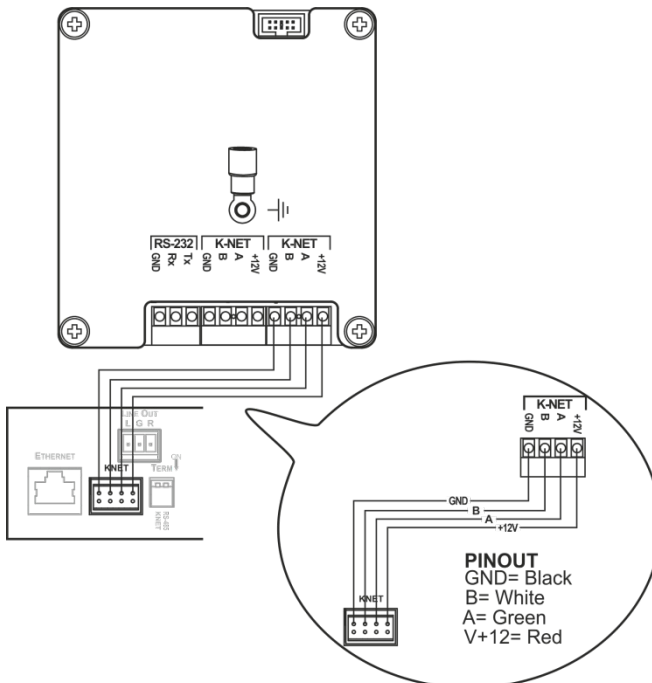

Figure 4: RC-53DLC connected to the SV-551 SummitView™ Processor / Switcher

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1 By authorized Kramer technical personnel or by an external system integrator

2 Power supplies are sold separately. Consult your Kramer dealer for details

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6 Installing the RC-53DLC Faceplate, Button Caps and Labels

This section describes how to install the faceplate, button caps and labels.
Figure 5 illustrates a sample button label sheet.
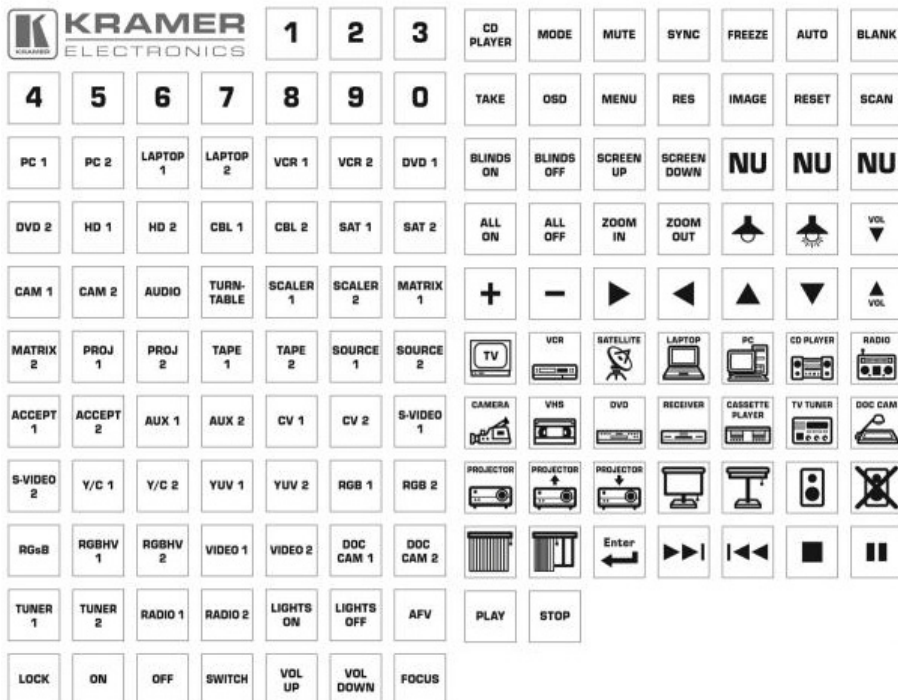

Figure 5: Sample Button Label Sheet

To install the faceplate, button caps and labels:

1. Remove the required labels from the supplied button label sheet.
2. Hold the button cap so that it is oriented as shown in Figure 6 with the "wings" on the left and right sides.

Figure 6: Button Cap Orientation

3. Insert the label inside the cap

Figure 7: Inserting the Label

4. Repeat for all six caps.
5. Retaining the orientation, place the six button caps on the buttons of the
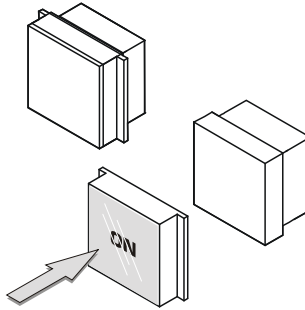   **RC-53DLC**.

Figure 8: Placing the Button Cap

6. Remove the protective foils from both sides of the Perspex (acrylic glass)
   windows.
7. Remove the protective foils from both displays.
8. Place the faceplate on the **RC-53DLC** so that the four screw mounting holes
   are aligned.
9. Insert the four mounting screws and tighten with a screwdriver.
10. Install the volume control knob.

7 Operating the RC-53DLC K-NET™ Auxiliary Control Panel

In the following example[1] (illustrated in Figure 9), the auxiliary control panel is labeled with specific functions and each button is programmed[2] to perform several tasks[3] as defined in Table 4.
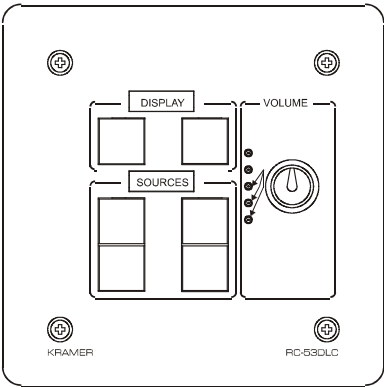
Table 4: The Commands Configuration

Figure 9: RC-53DLC Labels Setup

The Label	The Macro Sequence
ON	• Power up the projector • Power up the DVD player • The DVD button turns blue • Roll down the projector screen • 1 minute delay (for the projector to heat up) • The projector selects the DVD input
OFF	• Power down the projector • Stop the DVD player • The DVD button turns red • Power down the DVD player • Stop the VCR • The VCR button turns red • Power down the VCR • Roll up the projector screen
DVD	• Stop the video player • The VCR button turns red • The projector selects the DVD input • The DVD button color turns orange • Play the DVD • 5 second delay • The DVD button color turns green
VCR	• Stop the DVD • The DVD button turns red • The projector selects the VCR input • The VCR button color turns orange • Play the VCR • 5 second delay • The VCR button color turns green
VOLUME	• Use the VOLUME knob to adjust the audio level

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1 This is only one example among numerous possibilities, each button can be programmed as required. In this example, two buttons are not assigned

2 By the technical installer

3 A macro sequence, including several commands per button, carried out one after the other

8   Technical Specifications

Table 5 defines the technical specifications.

Table 5: Technical Specifications1 of the RC-53DLC K-NET™ Auxiliary Control Panel

PORTS:	2 K-NET on terminal block connectors; 1USB connector, 1 RS-232 on terminal block connector (factory use only)
POWER SOURCE:	12V DC, 140mA over K-NET
FUSE:	500mA, FSMD 1812
DIMENSIONS:	For the USA: 11.4cm x 2.6cm x 11.4cm (4.49" x 1.02" x 4.49", W, D, H) For Europe: 15.2cm x 1.9cm x 8.6cm (5.98" x 0.75" x 3.39", W, D, H) or 15.2cm x 1.9cm x 8cm (5.98" x 0.75" x 3.15", W, D, H)
WEIGHT:	0.14kg (0.31lbs.) approx.
ACCESSORIES:	Screwdriver

1 Specifications are subject to change without notice

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This limited warranty covers defects in materials and workmanship in this product.

What is Not Covered

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, modification, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature. This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any repairs attempted by anyone unauthorized by Kramer Electronics to make such repairs, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover cartons, equipment enclosures, cables or accessories used in conjunction with this product.

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To obtain a remedy under this limited warranty, you must contact either the authorized Kramer Electronics reseller from whom you purchased this product or the Kramer Electronics office nearest you. For a list of authorized Kramer Electronics resellers and/or Kramer Electronics authorized service providers, please visit our web site at www.kramerelectronics.com or contact the Kramer Electronics office nearest you.

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For the latest information on our products and a list of Kramer distributors, visit our Web site www.kramerelectronics.com**, where updates to this user manual may be found. We welcome your questions, comments and feedback.**

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

Caution

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